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ALF (AGRICULTURAL LIBRARY FORUM): AN ELECTRONIC BULLETIN BOARD SYSTEM

by Maria Pisa
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INTRODUCTION

Meet *ALF*, the National Agricultural Library's new micro-computer-based electronic bulletin board system. Short for *Agricultural Library Forum, ALF* provides electronic access to information about NAL products and services and serves as a focal point for networking activities for those who dispense and use agricultural information.

ALF is open to all those interested in exchanging ideas, sharing resources and seeking advice or assistance on agricultural library and information issues. Callers can dial into ALF around the clock (downtime is from 7:30-8:30 a.m., EST, Monday-Friday, for system maintenance activities), 7 days per week. Users interact with ALF using three basic types of communications:

- **Bulletins** - Contain information about library hours, policies, programs, services, contacts, and other reference materials of general interest such as lists of special publications, calendar of events, training workshops, job vacancies, etc. The information can be viewed on screen, captured, and/or printed.
- **Messages/Conferences** - Messaging allows participants to exchange comments and ideas and other dialog electronically. The system stores all messages for later reply. Conferencing enables callers to participate in special interest group discussions. Public conferences such as "AGRICOL," a roundtable for AGRICOLA database users, and a number of private conferences requiring special registration are available.
- **File Transfer** - Used for exchanging programs, text or data files between callers. By "downloading" or "uploading" files, users can share

photo: J. Swab
ALF management team: (L-R) William Feidt, ALF co-developer and technical adviser; Karl Schneider, sysop (systems operator); Maria Pisa, ALF co-developer and co-sysop; and Rebecca Thompson, assistant to the sysops.

public domain programs and other non-copyrighted materials. Files now available for downloading include the full-text of bibliographic publications published by NAL, technical notes, and expert advisory systems developed by NAL staff and users.

REMOTE BULLETIN BOARD SYSTEM FOR PERSONAL COMPUTERS

The software used to run ALF is called RBBS-PC or Remote Bulletin Board System for Personal Computers (Version 16.1 A). RBBS-PC is menu-driven and runs on IBM personal computers and compatibles. Known as "Userware" by its creators, RBBS-PC is wholly user supported. It is distributed by the Capital PC Users Group in Silver Spring, Maryland, a not-for-profit organization and is considered shareware meaning that it can be passed along at no charge if it is not altered. RBBS-PC is considered one of the pre-eminent software packages for IBM-type PC bulletin boards.

The host system runs on an IBM-AT with 512 K memory, a 60 megabyte hard drive, two U.S. Robotics Courier 2400 baud external modems and two Alloy PC Slave Cards and Alloy NTNX software (necessary to support a multi-line RBBS-PC).

GETTING STARTED

Although ALF is relatively easy to learn and use, the following instructions are provided for the benefit of the novice user who may find logging onto a Bulletin Board System (BBS) somewhat difficult at first. The more experienced user may want to review the dialup and registration procedures before logging on to save time and money. There is no charge to use ALF beyond the phone call to NAL.

EQUIPMENT AND SOFTWARE

Users need the following equipment and software to reach ALF:
- A computer terminal or computer
- A modem (2400, 1200, or 300 BAUD)
- Communications software - (i.e. Crosstalk, Qmodem, PC-Talk, Procomm)

Before users can dial into ALF, they need to set the software's communications parameters as follows:

SETTINGS

BAUD RATE:	300, 1200, or 2400
DATA BITS:	8
STOP BIT:	1
PARITY:	NONE
DUPLEX:	FULL

Having completed the above, the user is now ready to dial into ALF.

DIALUP AND REGISTRATION

Callers should follow this step-by-step procedure when dialing into ALF for the first time:

1. Dial (301) 344-8510 or (301) 344-8511. Wait approximately 5 seconds for a pre-logon welcome message to appear on the screen.

2. ALF will prompt the caller to enter his or her first and last name in succession. The caller will then be asked to enter his or her city and state. Example:

What is your FIRST Name?   Jane
What is your LAST Name?   Doe
Checking Users...
What is your CITY and STATE?   anycity, anystate
Carriage return or enter.

3. The system checks the user log and recognizing that the caller is a new user will print a statement about ALF's purpose and policies. The caller, after reading the ground rules can choose either to: < C > hange, < D > isconnect, < R > egister.

4. Assuming the caller has chosen to register, he or she will be prompted to enter a password to use for future access and re-enter it for confirmation.

5. System prompt: Can your terminal display lower case (Y/N)?

6. A "Graphic Help File" appears on the screen next. The caller is given three options for tailoring the bulletin board's visual output to the caller's PC system. Example:

GRAPHICS wanted: N)one, A)scii-IBM, C)olor-IBM, H)elp? n
GRAPHICS: None

[Note: when in doubt choose the "N" option! RBBS-PC recommends that users experiment to see the types of graphics that their systems support.]

7. System Note: The "More" prompt appears after a full screen of text has been displayed. There are three options for responding:

Y)es: Enter "y" to continue reading text

```
WELCOME TO RBBS-PC

mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm
m                                                          m
m          AA      LL      FFFFFF                          m
m         A  A     LL      FF                              m
m        AAAAAA    LL      FFFFF                           m
m        AA  AA    LL      FF                              m
m        AA    AA  LLLLLL  FF                              m
m                                                          m
m        (Agricultural Library Forum):                    m
m                                                          m
m        THE NATIONAL AGRICULTURAL LIBRARY'S              m
m        ELECTRONIC BULLETIN BOARD SYSTEM                 m
m              WELCOMES YOU                                m
mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm

  SYSOPS:  Karl Schneider, Maria Pisa      (Voice: (301) 344-2113
              Assisted by Becky Thompson           (301) 344-3704)

  Technical Consultant:  Bill Feidt  (Voice:  (301) 344-3813)

What is your FIRST Name?
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Figure 1: ALF's pre-logon or identification screen greets callers. Voice phone numbers are provided for users requiring special assistance. Preregistration through the sysop is available, if needed, for callers unfamiliar with dialing into BBSs.

N)o: Enter "n" to terminate text

NS: Enter "ns" to read remaining text nonstop

8. The system prompts the caller to choose a default file transfer protocol: *i.e.,* the parameter settings that are necessary to transfer files between the "host" (ALF) and the user. This feature allows computer systems to exchange files, regardless of hardware or communication software being used. The protocol the caller chooses is invoked during file transfer or the uploading and downloading of files. The user should refer to the documentation that comes with his or her communication software for specific information and select a protocol it supports. Example:

Default Protocol: A)scii, X)modem, C)Xmodem-/CRC, K)ermit, Y)modem, W)xmodem, N)one?

9. System Prompt: Want nulls (Y/N)? CRT users answer "N." Users with printer terminals answer "Y."

10. Having successfully completed the registration procedure, the caller is granted access to the system. Future logons will consist of only three prompts: first name, last name, and password.

OVERVIEW OF SELECTED ALF SCREENS AND MENUS

Persons calling ALF are first greeted by a pre-logon screen which identifies the system, NAL, and responsible staff (see Figure 1). It also begins the logon procedure.

A welcome screen consisting of general announcements and "housekeeping" information appears following logon (see Figure 2). Callers are alerted to upcoming activities, special events, new board features, new files available for downloading, and other timely information which is located

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Food for Thought:

"Water, gentlemen, is the one substance from which the earth can conceal nothing.
It sucks out its innermost secrets and brings them to our very lips." -- Jean Giraudoux

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AGRICOLA User's Group CONFERENCE - Now Open on ALF
Type J)oin from Main menu, semicolon, AGRICOL ("j;agricol")

Conference on APPLICATION of SCANNING METHODOLOGIES in LIBRARIES
November 17-18, 1988 See AG CALENDAR - BULLET5 for details

DAIRY NUTRITION - New edition with COMPUTER SOFTWARE - BULLET 19

Revised COLLECTION DEVELOPMENT POLICY for NAL - See Message #456

AGRICOLA/CRIS WORKSHOPS ANNOUNCED for FY89 - See BULLET 8

New Files Available for Downloading

VIDEO3.LST	Audio-Visuals in the NAL collection relating to Animal Welfare
TRAIN.LST	Training Materials in the NAL collection relating to Animal Welfare
PK36.EXE	An update of the PKARC utilities for file compression

Times on: 52 Last time on was: 08-26-88 13:00

7 NEW BULLETIN(S) since last call: 1 4 5 19 23 24 26
READ ALL new bulletins ([Y],N)?

Checking messages in MAIN.
Mail for YOU (* = Private)
78 *87 *91 94
Mail you left
26 56 68 69 70 *89 *92
Please kill old/unneeded messages

RBBS-PC CPC15.1C Node 2

Caller # 1490 # active msgs: 40 Next msg # 467 Last msg read: 296

69 min left

Figure 2: ALF's welcome screen, listing general announcements and "housekeeping" information, appears following logon.

MAIN MENU

[E]nter a Message	[U]sers Log	[W]ho else is on	[U]tilities Subsystem
[K]ill a Message	[A]nswer Questions	[H]elp	[F]iles Subsystem
[P]ersonal Mail	[B]ulletins	[J]oin Conferences	[G]oodbye
[R]ead Messages	[C]omment	[V]iew Conferences	[Q]uit to other Subsystems
[S]can Messages	[I]nitial Welcome	[X]pert on/off	
[T]opic of Msgs	[O]perator Page	[?]List Functions	

MAIN command < ?, A, B, C, E, F, G, H, I, J, K, O, P, Q, R, S, T, U, V, W, X > ? E

Figure 3: Callers can access ALF's electronic messaging, bulletins, and other features, and enter submenus through the main command menu.

in further detail elsewhere in the system. The selected postings are updated by the system operator (sysop) on a regular basis.

The system next tells the caller how many new bulletins have been added since the user last called (see Figure 2) and asks whether or not he or she would like to read them. First-time users are advised to answer "no" as all bulletins will be considered new; select instead those bulletins which are of interest from the Bulletin Menu (see Figure 5) which is accessed from the Main Menu. ALF then checks to see if the caller has private mail waiting and also reviews what messages the caller has left for others. Several other messages summarizing the caller's status in relation to the activity on the Board, the status of the main message file, and how much time the caller has left to interact with ALF are posted (Presently all users are given a daily time limit of 75 minutes).

The bulletin board's MAIN MENU appears next (see Figure 3; a KEY to Figure 3 is given in Figure 4). From here callers can send, scan, and receive mail, read bulletins (see Figure 5), enter sub-menus to join conferences (see Figure 6), upload and download public domain files (see Figure 7), etc. To select an option, choose the bracketed letter from the "Main Menu" command list and press enter or carriage return.

THE FUTURE

ALF began as a pilot project to test the feasibility and usefulness of exchanging and disseminating agricultural information using BBS technology. Much of the material which presently resides on ALF only hints at the information resources, services and expertise (Continued on page 6)

KEY

[E]nter a message	Public or password protected
[K]ill a message	Erase a message you left previously
[P]ersonal mail	List messages directed to you
[R]ead messages	Select message number(s) to read
[S]can messages	Read message header (date, from, to, topic)
[T]opic of messages	List message topics only
[U]sers log	Access through Utilities subsystem
[A]nswer questions	Questionnaire feature (inactive at present)
[B]ulletins	Lists available bulletins
[C]omment	Private message to sysop
[I]nitial Welcome	Repeat of log on welcome message
[O]perator Page	Pages SYSOP for 30 seconds
[W]ho else is on	Lists other users currently on system
[H]elp	Help screens
[J]oin conferences	Enter a specified conference subsystem or list the available conferences
[V]iew conferences	[View not implemented]
[X]pert on/off	Toggle between novice (menus) and expert (no menus)
[?]List function	Lists functions supported on this system
[F]iles subsystem	Upload and download files
[G]oodbye	Disconnect the call
[Q]uit	To other subsystem
[U]tilities subsystem	(Baud rate, graphics, password, statistics, time, userlog, etc.)

Figure 4: Key table for the main command menu in Figure 3.

ALF BULLETIN MENU

KEYWORDS	NO	SUBJECT	DATE
AGRICOLA	8	AGRICOLA/CRIS Training	7/20/88
AGRICOLA	7	AGRICOLA Production Report	10/18/88
ARChive files	4	Downloading/using ARChived files	8/24/88
Board	20	NAL Board Purpose and Policies	5/4/88
Contacts	6	Info. Ctrs. Scope & Contacts	4/88
Contacts	1	NAL Key Personnel & Service Contacts	9/88
Datebook	5	AG Calendar (THRU 9-01-90)	8/13/88
Friends	24	Award Nominations Open	9/14/88
Gaps	15	Serial Gaps	8/13/88
Info Alert	21	New Volunteer Program	5/6/88
Info Alert	3	NAL's AGRICOLA offered on CC-ROM	7/23/88
Info Alert	18	NAL TTY or TDD Calls Capability	4/88
Info Alert	22	Oral History Series Videotape	4/25/88
Info Alert	25	NAL Exhibits Photographs on Chinese Agriculture	7/16/88
New NAS Pub	19	Nutr. Req'mts of Dairy Cattle	9/88
Pubs	12	Agri-Topics	8/3/88
Pubs	13	Aqua-Topics	3/88
Pubs	14	Aquacultural Genetics & Breeding	6/22/88
Pubs	9	Quick Bibliographies	7/23/88
Pubs	11	Search Tips Series	3/88
Pubs	10	Special Reference Briefs	8/24/88
Serials	17	New Serials	8/13/88
Surplus	16	Surplus Publications	8/13/88
Water	2	New Water Quality Publication	7/29/88
Water dates	23	Water Quality Dateline	9/19/88

Bulletin #(s) [1 thru 26], L)ist, N)ew (Press [ENTER] to quit)?

Figure 5: ALF Bulletin Menu: contains information about NAL services and contacts and other reference material of general interest.

ALF CONFERENCE MENU

J)oin a conference
M)ain message system (reset and return to)
Q)uit the current conference and "J)oin" another conference
X)pert on/off

The current conferences available are:

Name	Description of Conference Focus	Status	Contact
AGRICOL	Database User's Group for AGRICOLA	PUBLIC	N/A (sysop)
WIN	Water Quality Information Network	Private	Terry Nipp
NRC-BA	Board on Agriculture of NAS	Private	Terry Nipp

Conference Function < J > oin, < L > ist, < M > ain, < Q > uit, < X > pert? j
Enter conference name? agricol
Welcome to AGRICOL Conference
Checking messages in AGRICOL Conference.

Figure 6: ALF Conference Menu: conferencing enables callers to participate in special interest group discussions. Public conferences such as "AGRICOL," a roundtable for AGRICOLA database users, and a number of private conferences requiring special registration are available.

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FILE command < ?,D,G,H,L,N,Q,S,U,V,X > ? l
What directories ( < U > pload, < A > ll, [ENTER] for menu)? a

* < Ctrl K > / < Ctrl X > aborts < Ctrl S > suspends *

AQUATOP1          14848    04-06-88    Fish Oil: Dietary Benefits
WHEREIS.COM       512      04-07-88    Utility to locate files on hard drive
WHEREIS.DOC       512      04-07-88    Documentation for WHEREIS.COM
NOTES.IDX         21252    05-09-88    Notes to Indexers--Numbers 1 to 16
ARTERY.SRB        77625    05-28-88    Childhood Antecedents to Adult Coronary...Diseases (SRB 88-06)
AGTRADE.SRB       40376    06-07-88    Competitiveness of U.S. Agriculture in World Trade (SRB 88-08)
ALIX.ARC          4352     06-22-88    "Arced" list of files available on ALIX BBS at Fedlink
OCLCHELP.ARC      12928    06-22-88    Adds online, RAM resident help screen to OCLC Terminal Software
PK36.EXE          118912   06-29-88    5/88 Rev. of Phil Katz's Archive Util.
AQREFADV.ARC      124044   06-30-88    AquaRef Expert Advisory System
LAQUADV.ARC       83537    06-30-88    Louisiana Aquaculture Expert Advisory
FNICAID.ARC       116943   06-30-88    Food & Nutr. Info. Ctr. A.I. Demo
OCHEMADV.ARC      103890   06-30-88    Organic Chemicals Expert Advisor
KNOWLADV.ARC      139920   06-30-88    Knowledge-Based Expert Advisor
DIABETES.PTH      31842    07-16-88    Nutrition and Diabetes (Pathfinder)
BIB.LST           18485    07-23-88    Bibliographic Series Current List
INDIAN.PTH        9020     07-27-88    Health Update on American Indians and Alaska Natives (Pathfinder)
FEDBBS.TXT        10240    09-21-88    FEDERAL AGENCY BBS OPEN ACCESS
VIDEO3.LST        40479    09-21-88    Audio-Visuals in...NAL Relating to Animal Welfare
TRAIN.LST         15111    09-21-88    Training Materials in...NAL Relating to Animal Welfare
LIBSOFT.ARC       9472     10-13-88    Brief list of MS DOS Library Software
CMBLS.ARC         27136    10-13-88    Annotated subject list of Library Software
```

Figure 7: ALF Files Directory, segmented view. Callers can exchange programs, text, or data files through the "Files Subsystem." By "downloading" or "uploading" files, users can share public domain programs and other non-copyrighted materials.

available through NAL, cooperating institutions and other allied groups that can be shared through BBS technology.

Since its introduction this summer, ALF has developed a still growing roster of users. As this bulletin board becomes more widely known, we hope to see a steady influx of new information, ideas, and dialog. A number of pilot projects are being contemplated which will further explore ALF's possibilities and usefulness including the evaluation of it as a mechanism for cooperative reference services, for receipt of document delivery requests, for delivery of online search results, and as doors to other systems (i.e. online databases, CD-ROM, ISIS). A new version of the software will be loaded in the next few months which will make ALF easier and more efficient to use; toll-free access also is under consideration.

D. Thomas Mack, author of RBBS-PC, states in his introduction to the software documentation that from the very beginning BBSs have excelled whenever there was a geographically dispersed audience with a need to exchange technical information in a timely and accurate manner. We think ALF fits this model and hope that it will play a role helping to network agricultural's wealth of information among its diverse user community.
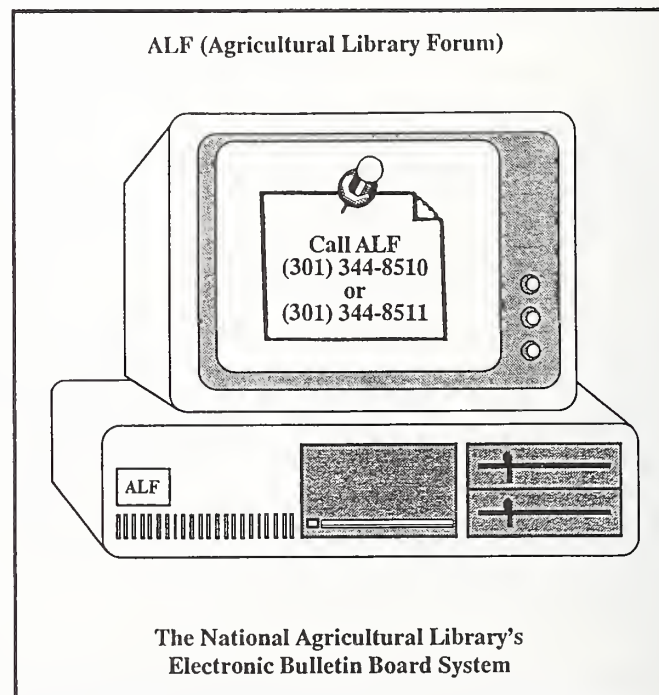
GUIDE AVAILABLE

Users or potential users may request a copy of a brief guide to the ALF system by writing to:

National Agricultural Library
Public Services Division, Room 100

10301 Baltimore Boulevard
Beltsville, MD 20705.

The Guide also can be downloaded from ALF (filename: ALF.DOC).

ALF (Agricultural Library Forum)

Call ALF
(301) 344-8510
or
(301) 344-8511

The National Agricultural Library's
Electronic Bulletin Board System

ALF logo designed by Rebecca Thompson and William Hauser.

AUTOMATIC SCHEDULING OF NAL REFERENCE DESK

by John B. Forbes
Reference Librarian

It has been the tradition at NAL to produce by hand a schedule for the following week's work at the reference desk. There are twenty shifts of two hours each to be assigned to six or seven librarians, with only one librarian for each shift. Making the assignments, at one time a task performed by the head of the Reference Branch, has been rotated for some years among the reference librarians themselves, each assuming responsibility for the scheduling one month at a time.

Because the librarians all have other commitments, which vary from week to week, the problem of devising an optimum schedule given fluctuating constraints can be a challenging one. Other libraries have had similar experiences and have on occasion looked to the computer to reduce the burden of this activity. NAL staff found one very useful paper on the subject to be: James C. Bean and Margaret H. Bean, "An integer programming approach to reference staff scheduling," *Information Processing and Management,* 21(5):459-464, 1985, which recounts their experience at the University of Michigan, Ann Arbor. NAL staff also attended a poster session at the 1987 ALA convention entitled: "There's got to be an easier way--a microcomputer scheduling program for the reference department" (conducted by staff of the Evans Library, Texas A&M University).

Neither of the above experiences proved, at the time of initial inquiry, to be entirely suitable for NAL's purposes, however. The Beans used a mainframe computer to solve their scheduling problem, and the Texas A&M program was far from available in response to a 1987 inquiry, because it was going to be substantially revised and was being rewritten in Turbo Pascal. Therefore, I began to look around for a software program on the market that might do NAL's scheduling for us. Using the *National Software Encyclopedia*, I had no trouble locating one entitled *MILP88* (for *Mixed Integer Linear Programming*, marketed by Eastern Software Products, MacLean, Virginia). Its two floppy disks were delivered on Tuesday, August 16, and by Tuesday, August 23, we had a PC-produced desk schedule.

The schedule as set up for our scheduling problem is a "zero-one" linear programming problem with 200 zero-one variables and, in the generalized problem, 160 constraints.

The 200 variables represent 20 slots times 10 librarians. The 20 slots represent 5 days times 4 shifts per day. A value of 1 in any slot represents the assignment of a particular librarian to a particular shift. The constraints are all formula-type statements that spell out explicitly all the basic conditions that must be met, such as:

1. Only one librarian to a shift.
2. Each librarian gets not more than one shift per day.
3. Normally, all 20 shifts must be filled.
4. Except for certain librarians, each librarian gets not less than two and not more then three shifts per week.
5. No librarian gets three days in a row.
6. No librarian gets more than two identical time-slots in a week.

The above are the constraints for the generalized problem. (For an abbreviated version of the constraints program see "Desk Scheduling Problem" on the lower half of page 8.) Each week there are individual additional constraints. If a librarian is not available for any shift or shifts, the affected slots are set to zero for that week's run, and the program produces a schedule based on what's left. (For a schedule produced by the program, see the box on page 8.)

The method of solution is the simplex method accompanied by the branch and bound procedure. This is considered routine in linear programming problems. Linear programming is a recognized branch of operations management and is included in current textbooks on the subject. I have enclosed a list of those recommended by the authors of the *MILP88* documentation (see Linear Programming Bibliography on page 9).

Theoretically, in linear programming, each feasible solution is examined and retained in memory until a more optimal feasible solution is found. Since there might be thousands of feasible solutions, this can easily get out of hand. (You might as well go buy your own mainframe.) The branch and bound technique is a method for reducing the number of solutions that have to be examined and remembered. Restricting the permissible values to integers brings the problem even more within range of the PC, whence the search for mixed-integer linear programming software in the first place. The zero-one "assignment" or "scheduling" problem is a specialized type of integer problem.

Rather than attempt to create a "cost" to be minimized, it was decided to use all the constraints that had been listed initially plus the weekly additional ones and consider that any solution that met these criteria would be satisfactory. Then the only problem that can arise is that the constraints may be so constraining that no feasible solution will be found. In this case we have only to relax/remove certain of the softer constraints, such as the restriction that no librarian should have three days in a row, or also if necessary, that no librarian should have more than two identical time-slots in a week, or finally, that no librarian should have more than three shifts in the week (in the stated order of preference).

On Tuesday, August 24, at about 3:00 P.M. we started running the schedule for the next week. At about 3:30 P.M. the software had produced a Lotus 123 file from which to type the schedule (see box on page 8). A few Lotus "macro" instructions tailored for any preferred output layout would put the finishing touches on this procedure.

SCHEDULE PRODUCED BY PROGRAM

LIBRARIAN	1	2	3	4	5	6	7	8	9	10	TOTAL/SHIFT
SHIFT											
Mon. 1	0	0	0	0	0	0	0	0	1	0	1
Mon. 2	0	0	1	0	0	0	0	0	0	0	1
Mon. 3	0	1	0	0	0	0	0	0	0	0	1
Mon. 4	1	0	0	0	0	0	0	0	0	0	1
Tue. 1	0	1	0	0	0	0	0	0	0	0	1
Tue. 2	0	0	0	0	0	1	0	0	0	0	1
Tue. 3	0	0	0	1	0	0	0	0	0	0	1
Tue. 4	0	0	0	0	1	0	0	0	0	0	1
Wed. 1	0	0	0	0	0	0	1	0	0	0	1
Wed. 2	0	0	0	1	0	0	0	0	0	0	1
Wed. 3	0	0	0	0	1	0	0	0	0	0	1
Wed. 4	0	0	1	0	0	0	0	0	0	0	1
Thu. 1	0	0	0	0	0	0	1	0	0	0	1
Thu. 2	0	0	1	0	0	0	0	0	0	0	1
Thu. 3	0	0	0	0	0	1	0	0	0	0	1
Thu. 4	1	0	0	0	0	0	0	0	0	0	1
Fri. 1	0	0	0	0	0	1	0	0	0	0	1
Fri. 2	0	0	0	1	0	0	0	0	0	0	1
Fri. 3	0	1	0	0	0	0	0	0	0	0	1
Fri. 4	1	0	0	0	0	0	0	0	0	0	1
LIBRARIAN	1	2	3	4	5	6	7	8	9	10	
SHIFTS/LIBN	3	3	3	3	2	3	2	0	1	0	

DESK SCHEDULING PROBLEM

August 23, 1988
(Add individual constraints as needed)
DESK
INTEGERS: 200
OBJECTIVE: MIN
CONSTRAINTS: 120
VARIABLES: 200
SLACKS: 100
DATE: 08-23-1988
TIME: 13:03:06
COST: (left blank)
Librarians 1-10 can have no more than 3 shifts.
Y.1   (I.1 + .. + I.20) < = 3; etc., through:
Y.10   (I.181 + .. + I.200) < = 3

Librarians 1-10 have a minimum of 2 shifts per week.
IMN.1   (I.1 + .. + I.20) > = 2; etc., through:
IMN.10 (I.181 + .. + I.200) > = 2

Librarians 1-10 cannot have 3 days in a row, in this case Monday-Wednesday.
IDMW.1   (I.1 + .. + I.12) < = 2; etc., through:
IDMW.10 (I.181 + .. + I.192) < = 2
Ditto, Tuesday-Thursday.
IDTT.1   (I.5 + .. + I.16) < = 2; etc., through:
IDTT.10   (I.185 + .. + I.196) < = 2
Ditto, Wednesday-Friday.
IDWF.1   (I.9 + .. + I.20) < = 2; etc., through:
IDWF.10 (I.189 + .. + I.200) < = 2

One shift, one librarian.
Y.11   I.1 + I.21 + I.41 + I.61 + I.81 + I.101 + I.121
          + I.141 + I.161 + I.181 = 1; etc., through:

Y.30   I.20 + I.40 + I.60 + I.80 + I.100 + I.120
          + I.140 + I.160 + I.180 + I.200 = 1

Librarians 1-10 cannot have more than 1 shift per day.
Y.31   (I.1 + .. + I.4) < = 1; etc., through:
Y.80   (I.197 + .. + I.200) < = 1

Librarians 1-10 cannot draw more than 2 identical time slots in a week (these were added after the first run).
J.1   I.1 + I.5 + I.9 + I.13 + I.17 < = 2; etc., through:
J.40   I.183 + I.187 + I.191 + I.195 + I.199 < = 2

Additional constraints can be added here each week, as Y.81 etc. Examples of such constraints would be unavailability for a particular slot (out of slots I.1 through I.200):
Y.81   I.65 = 0 (i.e., librarian 4, who has slots 61-80, is unavailable for the 5th slot in that series, namely Tuesday first shift).
Y.82   (I.1 + .. + I.16) = 0 (i.e., librarian 1, who has I.1 through I.20, is unavailable Monday-Thursday).
Any original constraints can be removed in case of conflict with a later constraint (for example, on Y.82, this librarian cannot be required to have 2 or more shifts, else no feasible solution will be found).
If no feasible solution is found, and it is not due to contradictions in the constraints, then the three-days in a row constraint is the first one to be dropped. If there is still no feasible solution, then we can go to a maximum of four shifts per week if necessary. Or some other combination of constraints can be tried that yields a solution.

BOUNDS: Each value that is tried for a solution can be either 1 or 0.
BOUND 1 > = I.1 etc., through BOUND 1 > = I.200

LINEAR PROGRAMMING BIBLIOGRAPHY

Driebeek, Norman J. *Applied linear programming.* Reading, MA: Addison-Wesley Pub. Co., c1969.

Gass, Saul I. *Linear programming: methods and applications.* 5th ed. New York: McGraw-Hill, c1985.

Hillier, Frederick S., and Gerald J. Lieberman. *Introduction to operations research.* 4th ed. Oakland, CA: Holden-Day, c1986.

Ho, James K. K. *Linear and dynamic programming with Lotus 1-2-3, Release 2.* Portland, OR: Management Information Source, c1987.

Wagner, Harvey M. *Principles of management science, with applications to executive decisions.* 2d ed. Englewood Cliffs, NJ: Prentice-Hall, c1975.

For additional information or for the full text of the "Desk Scheduling Problem," please contact:

John B. Forbes
Reference Branch, Room 111
National Agricultural Library
10301 Baltimore Boulevard
Beltsville, MD 20705

Or call: (301) 344-1204.
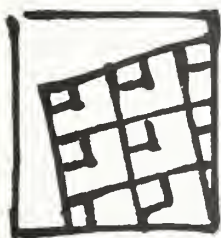
Agriculture Datebook

October 27-28: **Veterinary Drug Bound Residues Symposium.** Washington, DC; Vista International Hotel. Contact: Suzanne Fitzpatrick, Center for Veterinary Medicine, 5600 Fisher's Lane, Rockville, MD 20857.

October 31: **Codex Alimentarius Veterinary Drug Residue Meeting.** Washington, DC. Contact: (202) 447-7025.

October 31-November 1: **Annual Conference of the American Association of Food Stamp Directors.** Myrtle Beach, SC. Contact: (703) 756-3062.

November 6-9: **International Irrigation Exposition & Technical Conference.** Las Vegas, Nevada. Contact: (703) 524-1200.

November 10: **16th Annual Washington Analysis/County Securities Fall Conference.** Washington, DC. Contact: (202) 447-4164.

November 10-12: **National Future Farmers of America Annual Conference.** Kansas City, MO. Contact: FFA, Alexandria, VA, (703) 360-3600.

November 10-13: **National Association of Farm Broadcasters' Fall Convention.** Kansas City, MO. Contact: (913) 272-3456.

November 12-15: **National Association of State Univer-** sities & Land Grant Colleges Annual Meeting. Dallas, TX; Sheraton Park Central & Marriot Park Central. Contact: NASULGC, (202) 778-0850. Or contact: (202) 447-4423.

November 13-16: **American Bankers Association's National Agricultural Bankers Conference.** Des Moines, IA. Contact: (202) 663-5100.

November 13-16: **American Society of Farm Managers and Rural Apppraisers Annual Meeting.** Indianapolis, IN; Hyatt Regency. Contact: (303) 758-3513.

November 14: **Joint US/India International Symposium on Aquaculture Research Needs for the Year 2000.** New Delhi, India. Contact: (202) 447-5923.

November 14-17: **National Resources for the 21st Century Conference.** Arlington, VA; Twin Bridges Marriott Hotel. Contact: American Forestry Association, (202) 667-3300.

November 15: **Agricultural Agents National Leadership Development Seminar.** Chicago, IL. Contact: (202) 447-3377.

November 15-17: **National Advisory Council on Rural Development Meeting.** Washington, DC. Contact: (202) 447-4581.

November 16-17: **Make It By Marketing Conference.** Lancaster, PA; Willow Valley Resort & Conference Center. Contact: Tom Becker, (717) 757-9657.

November 17-18: **Second Annual National Corn Utilization Conference.** Columbus, OH; Airport Radisson Hotel. Contact: National Corn Growers Assn., (202) 371-1450.

November 18-19: **Company of Farmers Conference.** Warwick, England. Contact: (202) 447-4164.

November 20-23: **The Irrigation Association Annual Meeting.** Las Vegas, NV. Contact: IA, Arlington, VA, (703) 524-1200.

November 20-December 8: **Training Course on Seed Handling for Genebanks.** CENARGEN, Brasilia, Brazil. Contact: Chris Chapman, FAO, 1001 22nd Street, N.W., Suite 300, Washington, DC 20437.

November 21-24: **International Association of Agricultural Librarians and Documentalists Regional Conference.** Serdang, Selangor, Malaysia, Universiti Pertanian Malaysia. Contact: Miss Hafizah Hassan, IAALD Regional Conf. 1988, c/o The Library, Universiti Pertanian Malaysia, 43400 UPM, Serdang, Selangor, Malaysia.

November 23: **Molecular Recognition Conference.** London, UK. Contact: Ms. Sarah Chandler, Press Office, Online International Limited, Pinner Green House, Ash Hill Drive, Pinner Middlesex HA5 2AE U.K.

November 27-December 2: **American Society of Agronomy, Crop Science Society of America, Soil Science Society of America 80th Annual Meeting.** Anaheim, CA. Contact: ASA/CSSA/SSSA, 677 S. Segoe Road, Madison, WI 53711. (608) 273-8080.

November 28-December 1. **National Milk Producers Federation 72nd Annual Meeting.** Anaheim, CA. Contact: (202) 653-6976.

November 29-30: **USDA Outlook Conference.** Washington, DC. Contact: (202) 447-4623.

November 30. **Food & Drug Law Institute Annual Educational Meeting.** Washington, DC. Contact: (202) 447-7025.

AN EXPLORATORY STUDY OF TROPICAL AGRICULTURE IN AGRICOLA, AGRIS, AND CAB

by Chen Qiubo
Deputy Director
Techno-Scientific Information Institute
South China Academy of Tropical Crops
Hainan Province, China

INTRODUCTION

The tropical world possesses great potential for the development of agriculture because of its unique natural resources that are still underexploited due to historical and technological reasons. The further boosting of tropical agriculture demands much better information services, and, therefore, information sources. Potential information sources and their availability are very important in this respect.

The three major agricultural databases available commercially world-wide, AGRICOLA, AGRIS, and CAB International Abstracts, are expected to contain large information sources in tropical agriculture in a broad sense. Some comparative studies have been made on AGRICOLA, AGRIS, and CAB, but no report is available in tropical agriculture topics. The present study is aimed at gaining some insights from the three databases in reference to tropical agriculture, especially tropical crops, by on-line searching using some common descriptors. The results will serve to provide some basis for selecting or accessing the respective databases by people in tropical areas.

PROCEDURES AND METHODS: CHOICE OF COMMON DESCRIPTORS

There are differences in the indexing procedures and requirements of the producers of the three databases. To disclose their contents in tropical agriculture completely, some common descriptors should be used. A compromise was made in the choice of the common descriptors by picking up descriptors from *CAB Thesaurus, AGRIS AGRIVOX,* and the *Agricultural/Biological Vocabulary* formerly used by NAL. Thus, in the case of tropical crops, several common words or terms together with scientific names were used at the same time. However, not all descriptors used are present in each vocabulary.

SEARCHING AND PROCESSING OF RETRIEVALS

Searching was done on DIALOG using the chosen descriptors. Since AGRICOLA and CAB have two files each, retrievals from both files in each database were pooled together to yield a sum for the field retrieved. The searches were conducted during January 1988. Therefore, the periods covered were 1970 to December 1987 for AGRICOLA; 1974 to November 1987 for AGRIS; and 1972 to November 1987 for CAB.

RESULTS AND DISCUSSIONS

Tables 1-7 give the results of the searches (see pages 11 and 12). In all of the fields retrieved, all three databases contributed positive results.

AGRICOLA yielded the highest number of records in the fields of tropical animal sciences or animal husbandry, tropical rural sociology, and guayule, while AGRIS contained the highest number of records in hevea, pineapple, avocado, durian, and rambutan. In all other cases CAB topped the list. However, as far as most fields are concerned, AGRICOLA and AGRIS, especially the former, possess comparable amounts of entries with CAB.

It should be noted that the searching in the present study was by no means an exhaustive one because of economic and time considerations. The searched fields were samples of the contents of tropical agriculture in the three databases. Since differences exist among the three databases in their indexing procedures, one could not expect to retrieve fully all records in tropical agriculture from the three databases. Some omissions or missed records are probable. In some cases, the use of different Boolean operators will produce a better yield. In cases other than crops, searching with some subgroup terms under each respective group would also render a higher yield of records. Even so, the resultant yields do present a clear picture of tropical agriculture contained in the three databases.

CONCLUSION

1. The three principal agricultural databases, AGRICOLA, AGRIS, and CAB, separately and collectively, hold a very large amount of information in tropical agriculture. They are very good information sources for tropical agricultural librarians, information searchers, and research workers. The full exploitation of the three databases by the tropical world will cater to the increasing need for information and favor the tropical economy.

2. In fact, no one database, either AGRICOLA, AGRIS, or CAB, is strong in all respects. Each of them has its own strong points and characteristics. In addition, AGRICOLA is a very good tool for USDA publications, AGRIS is good in FAO reports and non-conventional documents, while CAB is very strong in non-U.S. publications, especially those from Commonwealth and European Community countries.[1]

3. For a better coverage of tropical agricultural information sources, it would be better to consult the three databases at a time when communication conditions and financial status are favorable.

REFERENCE

[1] Maria A. Porta (1986) "Selected agricultural databases and computerized systems." *Computers and Electronics in Agriculture,* vol. 1, 1986, p. 289-297.

Table 1: Records of tropical agriculture in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Tropical agriculture	408	325	1,125
Tropical animal science? or animal husbandry	39	81	85
Tropical forest? or tropical forestry	606	521	1,323
Tropical fisheries or tropical fish culture	41	21	43
Tropical food and nutrition	60	27	93
Tropicals soils	341	258	543
Tropical agricultural engineering or agriculture engineering	7	6	17
Tropical agricultural economics	8	1	37
Tropical rural sociology	35	8	7
Tropical plant? pest? or disease? and control? or management?	112	114	359

Table 2: Records of some tropical food crops in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Rice or Oryza sativ	27,977	29,037	45,818
Cassava or Manihot esculenta	1,862	3,340	4,529
Sweet potato or Ipomoea batatas	1,254	1,286	2,940

Table 3: Records of sugarcane and oil palm in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Sugarcane or sugar cane or Saccharum officinarum	8,406	6,746	11,620
Oil palm or Elaeis guinaensis	872	1,636	1,954

Table 4: Records of beverage or stimulant crops in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Tea or Camellia sinensis	3,925	2,260	4,590
Coffee or Coffea arabica or Coffea robusta or Coffea liberia	4,427	3,827	6,422
Cocoa or Theobroma cocao	1,787	2,383	3,218

Table 5: Records of rubber crops in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Hevea or rubber tree?	1,007	2,866	1,387
Guayule	225	46	222

Table 6: Records of tropical nuts in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Coconut or Cocos nucifer	2,016	2,855	4,589
Cashew nut or cashews or Anacardium occidentales	307	280	521
Betel nut or betel palm or arecan nut or arecannut palm or Erica catechu	106	84	175
Macadamia	312	111	377

Table 7: Records of some tropical fruits in AGRICOLA, AGRIS and CAB searched with common descriptors

Descriptors	AGRICOLA	AGRIS	CAB
Citrus	10,118	6,943	13,661
Banana? or plantain? or musa	1,114	2,634	2,890
Pineapple? or Ananas cosmasa or Ananas sativus	591	978	853
Papaya or papaw or Carica papaya	922	665	966

(See TABLE 7, page 12, col. l)

Descriptors	AGRICOLA	AGRIS	CAB
Mango?? or mangifera indica or Mangifera odorata	1,545	1,201	2,715
Avocado or Persea americana	220	580	263
Mangosteen? or Garcinia mangostana	26	35	41
Durian or Durio zebethinus	31	88	82
Jackfruit or Ortocarpus heterophyllus	51	61	128
Guava or Psidium guajava	400	421	1,105
Rambutan or Nephelium lappaceum	19	127	57
Feijoa or Acca sellowiana	62	17	127
Passion fruit? or Passiflora edulis or Passiflora quadrangularis	120	186	561
Litchi or lychee or Litchi chinensis	198	109	410
Date palm? or phoenix dactylifera	293	503	640

December 1-2: USDA/FDA Journalists' Conference On Food Safety and Nutrition. Washington, DC; National Press Club. Contact: Ann Chadwick, (202) 382-9681.

December 2-6: National Vocational Agricultural Teachers Association, Inc. Meeting. St. Louis, MO. Contact: NVATA, Inc., (703) 780-1862.

December 3-8: National 4-H Council Annual Congress. Chicago, IL. Contact: National 4-H Council, Chevy Chase, Md, (301) 961-2800.

December 4-5: 46th Professional Agricultural Workers Conference. Tuskegee, AL; Tuskegee University. Contact: T.T. Williams, PAWC, (205) 727-8764.

December 5-8: 22nd Annual National Agricultural Aviation Association Convention & Exposition. Las Vegas, NV; Tropicana Hotel. Contact: NAAA, (202) 546-5722.

December 6-8: Commercial Field Production of Cut and Dried Flowers Symposium. St. Paul, MN; Ramada Inn. Contact: Cathie Bergum, U. of Minn., (800) 367-5363, or (612) 625-3775.

December 6-8: National Farmers Organization National Convention. Lexington, KY; Hyatt Regency. Contact: NFO, (515) 322-3131.

December 8-9: USDA/FDA Journalists' Conference On Food Safety and Nutrition. San Francisco, CA. Contact: Ann Chadwick, (202) 382-9681.

December 10-17: AGROTRENDS '88 International. Manila, Philippines; Philippine International Convention Center. Theme: "Philippine Agri-Products To The World." Contact: Agrotrends '88 International, P.O. Box 27 Greenhills, San Juan, Philippines.

December 12-16: International Conference on Acceptance, Control of, & Trade in Irradiated Foods. Geneva, Switzerland. Contact: (202) 447-4256.

December 13-16: American Society of Agricultural Engineers Annual Meeting. Chicago, IL, Hyatt Regency. Contact: ASAE, St. Joseph, MI. (616) 429-0300.

December 15: Cooperative Forestry Research Advisory Council Meeting. Washington, DC. Contact: (202) 447-4423.

1989 EVENTS

January 8-12: American Farm Bureau Federation 70th Annual Meeting. San Antonio, TX. Contact: AFBF, (312) 399-5700.

January 18-21: American Sheep Industry Convention. Las Vegas, NV. Contact: ASIC, 200 Clayton Street, Denver, CO 80206.

January 20-27: UCLA Molecular Biology Symposium. Frisco, CO. Contact: (213) 206-6292.

January 22-25: Annual Meeting of the National Councl of Farmer Cooperatives. Honolulu, HI. Contact: (202) 653-6976.

January 30-February 1: National Cattlemen's Association Annual Convention. Phoenix, Arizona. Contact: NCA Convention Dept., P.O. Box 3469, Englewood, CO 80155.

February 1-3: International Poultry Trade Show. Atlanta, GA; Georgia World Congress Center. Contact: Southeastern Poultry & Egg Association, 1456 Church Street, Decatur, GA 30030.

February 5-8: 86th Annual Meeting of Southern Assn. of Agricultural Scientists. Nashville, TN. Contact: SAAS, (205) 887-5652.

February 6-8: Southeastern Aerocultural Fair (AL-FL-GA). Plain City, FL. Contact: National Agricultural Aviation Assn., (202) 546-5722.

February 6-10: Miami Biotechnology Winter Symposium. Miami, FL; Miami Knights International Center. Contact: (305) 324-5665.

February 8-10: Agricultural Relations Council (ARC) Annual Meeting. Tucson, AZ; Westward Look Resort. Contact: Paul Weller, ARC Exec. Sec., (202) 785-6710.

February 19-21: American Simmental Association Convention and Annual Meeting. Little Rock, AR; Excelsior Hotel. Contact: ASA, One Simmental Way, Bozeman, MT 59715.

February 22-24: Midwest Poultry Federation 18th Annual Convention. Minneapolis, MN; Hyatt Regency. Contact: MPF, 678 Transfer Rd., St. Paul, MN 55114.

February 27-March 4: XIIth EUCARPIA Congress. Gottingen, West Germany Contact: Secretariat, Institut fur Pflanzenbau und Pflanzenzuchtung, Georg-August-Universitat, Von Siebold-Str. 8, D-3400 Gottingen, West Germany.

NAL INITIATES WATER QUALITY GROUP

Water quality is at the forefront of national concerns. With continuing attention to crisis situations caused by drought, pollution and contamination of water resources, as well as their chronic degradation, awareness of water quality issues has risen to new heights.

Decision makers at all levels are seeking answers to water quality questions and solutions to problems. Since water is one of the basic natural resources needed for the production of food, fiber, and forest products, USDA has targeted water quality as a very high priority.

NAL has recently expanded its information activities to support the USDA water quality initiative. In addition to collection development and identification of information resources, NAL assembled a group of Federal personnel on July 29th to discuss using the Library's nationwide electronic bulletin board as a vehicle for accessing and exchanging water quality information (see the article on ALF in this issue of *ALIN*).

One recommendation from the group meeting on July 29th has already been implemented, and that is the establishment of a conference on the bulletin board. Such a conference allows the caller to gain access to special interest group discussions without "wading" through a lot of unwanted information.

WIN, short for "Water Information Network," is the title of the conference that was launched in September. Plans for

WIN include several different categories of information such as a calendar of events, innovative programming, new resources available, news items, legislation, and research. WIN is interactive, and its success will depend on contributions of noteworthy information by conference members. Representatives from such organizations as Congress, the Office of Technology Assessment, the National Academy of Sciences, and USDA's Agricultural Research Service and the Extension Service are currently involved in this pilot study.

Persons who wish to join the WIN Conference on the NAL bulletin board, should leave a message indicating the desire to join for Terry Nipp, the conference chairman. In ALF use the [E]nter a Message command on the main message board.

--Kathleen Hayes

Dr. John Owens, representing NASULGC, and Samuel Waters, Associate Director of NAL. [photo: D. Starr]

NASULGC VISITOR

One of the national organizations with which NAL coordinates on a regular basis is the National Association of State Universities and Land-Grant Colleges (NASULGC), particularly through its Division of Agriculture Library Liaison Committee. On September 19, the Chairman of the Committee, Dr. John Owens of New Mexico State University, Las Cruces, New Mexico, visited NAL.

Dr. Owens met with NAL staff concerning NASULGC participation in agricultural information networking and his committee's role in current network planning, concerning NAL's cooperative projects, especially those with land-grant libraries, and concerning developments in information systems and technologies at NAL. Dr. Owens and NAL staff renewed commitments to work together to advance the ways in which agricultural libraries can improve services to researchers, educators, students, farmers, and ranchers.

photo: D. Starr

(L-R) Maria Pisa, co-developer of NAL's bulletin board--ALF; Dave Farrell, Agricultural Research Service; Fred Bergsrud, Minnesota Cooperative Extension Service; and Skip Stiles, House Committee on Agriculture, discuss the feasibility of using ALF as a vehicle for accessing and exchanging water quality information.

Staff Update

MARIA PISA

Maria Pisa, author of the lead article in this issue of *ALIN*, "ALF (Agricultural Library Forum): An Electronic Bulletin Board System," is a co-developer of the system, and continues work with it as a co-systems operator (sysop). Her development of the system was accomplished as one of her special projects as Assistant to the Chief of the Public Services Division of NAL, which position she assumed in March 1987. Since August 1988, she has also been Acting Head of the NAL Reference Branch.

photo: J. Swab
MARIA PISA

Ms. Pisa came to NAL in January 1981 from USDA's Statistical Reporting Service, where she had worked since 1978. She earned her Master of Library Science from Catholic University in 1978, and a Bachelor of Science from Boston University in 1974. Before entering the library profession, she taught high school English for 2 years in White Plains, New York.

Prior to assuming her present position in the Public Services Division, Ms. Pisa had served at NAL as a Reference Librarian in both Beltsville and D. C. from 1981-84, and was a technical information specialist in the Education and Information Staff from 1984-87. In the latter position she had been editor of this publication, *ALIN*, and of a variety of other NAL publications, and served as the Executive Secretary of the Associates of NAL. She has been the author, coauthor, or compiler of various NAL publications and bibliographies. Among her accomplishments as Executive Secretary of the Associates, was the launching of its Sales Desk and related activities.

Ms. Pisa resides in Annapolis, Maryland, with her husband Charles Shafer, a systems analyst at the General Accounting Office. They especially enjoy boating and fishing, and are active in supporting water quality and water rights issues and activities, among them cleaning up pollution in the Chesapeake Bay.

WILLIAM FEIDT

William Feidt is a co-developer and the technical adviser of NAL's electronic bulletin board system, ALF, featured in this issue of *ALIN*. He has been concerned primarily with the software used by the system. As Head of NAL's Library Automation Branch, he manages programs and supervises staff responsible for all of NAL's computer systems, both hardware and software, including: ISIS (Integrated System for Information Services), which runs on the Library's Hewlett Packard HP3000, Series 70 minicomputer; various programs run on the Library's Alpha Micro super microcomputer; and for supporting over a hundred microcomputer workstations throughout the Library and coordinating with their users. The Branch is also responsible for systems analysis for both existing and new computer systems.

photo: D. Starr
WILLIAM FEIDT

Mr. Feidt joined the NAL staff as a Library Technician in Serials in 1968. Thereafter, he held a variety of positions in several sections of the Library, including Acquisitions where he was promoted to Technical Information Specialist; the Food and Nutrition Information Center (FNIC), where he was database manager for the FNIC contributions to AGRICOLA; and the administrative offices of NAL. He joined what is now the Information Systems Division (ISD) in 1984 as database manager for AGRICOLA, and assumed his present position as Head of the Library Automation Branch in 1985.

In his leisure time Mr. Feidt is also interested in microcomputing as a hobby. In addition he is an extra-class amateur radio operator.

REBECCA THOMPSON

Rebecca Thompson has been assisting the systems operators of the NAL electronic bulletin board system, ALF, with maintenance operations. She has been inputting information, doing daily backup of the system, and helping with the writing and development of the *Brief Guide* to the system. She is a library technician in the Information Centers Branch, which she joined full-time in January of this year after graduating from the University of Maryland with a B.S. in Marketing in December 1987. Ms. Thompson joined the Library staff as a student aid in Reference in 1985.

photo: J. Swab

REBECCA THOMPSON

In addition to carrying out a variety of duties in the Information Centers Branch and working with the ALF sysops, Ms. Thompson has been working with the NAL staff responsible for the text-digitizing project, and has been helping Public Services Division staff with preliminary preparation of manuscripts which will be published, including inputting and revising text, and preparation of covers--particularly for the *Quick Bibliography* series.

KARL SCHNEIDER

Since *ALIN* last published a profile on Karl Schneider [see 14(3):16-17., March 1988] he has assumed from Maria Pisa the responsibility of systems operator (sysop) for NAL's electronic bulletin board, ALF. This is a corollary to related duties he performes as a Reference Librarian, as an AGRICOLA Training instructor, and as a provider of access to various systems and databases in NAL public services activities.

photo: D. Starr

KARL SCHNEIDER

JOHN B. FORBES

John Forbes, author of the article in this issue of *ALIN*, "Automatic Scheduling of the Reference Desk," joined the NAL staff in 1959. He had earned his M.L.S. at the University of Minnesota in 1957, and came the USDA Library to work on the *Bibliography of Agriculture (B of A)*. In 1963 he became the editor of the *B of A*, and remained in that position until it began commercial publication after the 1969 volume. From 1969-1970 he was acting Chief of Cataloging, and from 1970 through 1986 he served successively as administrative assistant to the Chiefs of Technical Services, Public Services, and Field and Special Services. He joined the Reference staff in 1986.

Mr. Forbes has been involved with a variety of NAL networking activities, especially cooperative projects with the land-grant libraries, NAL outreach and publication activities, and automation of various library functions. Among the

photo: J. Swab

JOHN FORBES

cooperative projects were NAL's participation in the microfilming of land-grant publications for several years, and various aspects of the regional document delivery system. He chaired the committee which produced NAL's *Guidelines for the Preparation of Bibliographies*, produced several bibliographies, including *Literature for U.S. Aquaculture*, worked with various persons in the private sector on contract publications, and authored a variety of papers on NAL activities. He did the dBase programming for the keyword index to NAL's *Quick Bibliographies*, USDA's *Bibliographies and the Literature of Agriculture*, and other publications. He is currently working on an inventory and keyword index of NAL's Reference Collection.

Mr. Forbes married Beverly Anderson in 1962, and they have a daughter, Heidi, aged 23. In his leisure time, Mr. Forbes enjoys music, including playing the piano, and studying foreign languages.

PRR TITLES

The publication, "Periodical Reading Room Titles," compiled by Patricia A. Krug, Reference Branch, is available for distribution while supplies last. The Periodicals Reading Room contains approximately 600 titles out of more than 26,000 that are received into the NAL collection each year. To request a copy, send a self-addressed mailing label to the address below. Only one copy will be supplied; however, requesters may reproduce additional copies.

National Agricultural Library
Reference Branch, Room 111-PRR
10301 Baltimore Boulevard
Beltsville, MD 20705

NAL AND ARS SPONSOR 1988 FEDERAL WOMEN'S - HISPANIC EMPLOYMENT PROGRAMS LUNCHEON

The National Agricultural Library and the Agricultural Research Service joined together in September to honor the Hispanic Woman. This marked the first year of a five year USDA-wide celebration of Hispanic contributions to our society. The program culminates in 1992, exactly 500 hundred years after Columbus discovered America.

Eighty people attended the Hispanic Women's luncheon on September 13 at the Howard Johnson Hotel in New Carrollton, Maryland, and heard Linda Lopez, reporter for WRC-TV, speak about what it means to be an Hispanic women in America today. Entertainment was provided by Orquesta "La Tentación" (The Temptation), playing music from the musicians' homelands which include Argentina, Chile, Haiti, Honduras, Panama, and Puerto Rico.

ARS presented EEO awards to its personnel who had demonstrated outstanding service in the EEO area. The occasion was sponsored and hosted by both Federal Women Program Managers and Hispanic Employment Program Managers from NAL and ARS.

--Janet Wright

photo: J. Swab

Speakers and Beltsville Area FWP/HEP Subcommittee Members (L-R) are Vallie Bray, FWP Co-Manager, ARS; Thomas Neis, Executive Officer, NAL; Janet Wright, FWP Manager, NAL; Mary Talbot, FERG, Hyattsville; and Margaret Johnson Green, EEO Manager, ARS.

LINDA LOPEZ

The keynote speaker at the luncheon is on the staff of WRC-TV, Channel 4, and is anchor of "News 4 Today," a half-hour morning show featuring local news, traffic reports, sports, and weather.

500 YEARS OF HISPANIC HERITAGE

by Janet Wright
Head, Circulation Unit, Lending Branch
and Federal Women's Program Manager, NAL

The U.S. Department of Agriculture is celebrating Hispanic contributions to our society with a five year program, "500 Years of Hispanic Heritage," which begins this year and culminates in 1992, exactly 500 years after Columbus' discovery of America (an expedition which Queen Isabella had the foresight to finance.) This year's theme is the "Hispanic Woman." This article presents a small sampler of USDA employees who are Americans of Hispanic heritage. These profiles provide a personal window on a national program.

FRANCISCO APODACA traces his ancestry back to the original conquistadors that came from Spain in the late 16th and early 17th centuries to settle in what is now northern New Mexico. He met his wife in Chile where he had gone on a fellowship to study labor relations. In 1961 he came to Washington to work for the Inter-American Development Bank. He had majored in Inter-American Affairs at the University of New Mexico and meant to work in the political sphere, but his natural talent with numbers kept coming through, and he found himself working more and more

photo: J. Swab

Speakers and Beltsville Area FWP/HEP Subcommittee Members are (L-R) Dr. Edward P. Knipling, Director, Beltsville Area, ARS; Bob Tetrault, ARS; Patsy Jackson, ARS; Diane Adger-Johnson, ARS; and Maryann Loftus, Subcommittee Chairperson and FWP-HEP Co-Manager.

photo: Janet Wright
FRANCISCO APODACA

with the budget. He began working for USDA ten years ago and is now the Coordinator for ADP implementation, budget and finance at FSIS. His aim is to see that USDA "gets more bang for its bucks."

Apodaca is also the President of Hispanic American Cultural Effort (HACE) which has existed for 16 years and has 40 active members. Its purpose is to assist and advise the Department of Agriculture in the development of programs which will foster a better representation of minorities in the workforce. It also serves as a support group for Hispanic employees and networks with other local and national Hispanic groups. Apodaca said, "I want to encourage the dissemination of knowledge about Spanish culture," and a good way of doing this is through HACE. "My philosophy is to be positive and constructive and to reach out to others as much as possible."

ELDA INOUE is from Ponce, Puerto Rico, a small town on the Southern side of the island famous for preserving traditions. She came to Washington in 1970. Her first job was in the Mayor's office as an Investigator with the Office of Human Rights. "Back then we did everything," she says. "Investigated, negotiated, refereed, implemented...everything" --which is probably why she is a natural in her job today as the EEO Manager for the Office of International Development.

"I'm constantly in the problem solving mode with employees," she says, "trying to resolve employee concerns. I want to negotiate a win/win resolution. It is in our best interest to pay attention to concerns before they become complaints." She tells us, "My job is to convince managers that EEO is an effective way of doing business." She measures her considerable success by the fact that many managers have begun to come to her

for advice about preventing *possible* problems.

VIONENETTE TIDWELL comes from San Juan, Puerto Rico. She joined the Department nine years ago to process EEO complaints. Last June she assumed new duties as the Hispanic Employment Program (HEP) Manager for all of USDA. She wants to provide leadership and guidance to supervisors and HEP managers in the implementation of the HEP program. Her priority is the recruitment of new Hispanics into the Department.

ANA ESTRADA works in the Agricultural Marketing Service. Nine years ago, about the time she was graduating from the University of Texas in El Paso, she was approached by a recruiter from USDA who promised her that if she would come to Washington, he would meet her at the airport, find her a place to live and give her a great job. Ana had never in her life been on a plane or outside El Paso, but she came.

And there was no one there to meet her at the airport!

After a long, uncertain while she called her mother. "You get on the next plane out of there and come home!" her mother said.

But Ana persevered, and finally a USDA representative did arrive--he had been delayed in the rush hour. (That was Ana's first lesson about Washington traffic.) Her worries were not over yet, for she soon found out that there was no place for her to live and no job either. The Amigos Program under which she had been recruited was so new that it wasn't working properly yet.

Still, Ana persevered and so, with her new Marketing degree in hand, became--a clerk typist.

Still, Ana persevered! The happy end to this story is that today, nine years and

photo: Janet Wright
VIONETTE TIDWELL

photo: Janet Wright
ELDA INOUE

photo: Janet Wright
ANA ESTRADA

eight grade levels later, Ana works as an Agricultural Marketing Specialist. She buys fruits, vegetables, nuts, and juices by the truckload and sees that they are distributed in the proper sequence to needy families, Indian reservations, and prisons and other institutions. And in the course of her business travels, she also recruits young Hispanic people to come to work for USDA.

"I tell them the truth!" she says. "I tell them about my experience, I tell them about the traffic in Washington and about the cost of living, but I also tell them we're doing better now and that there is great opportunity in the Department." Thanks largely to Ana, her division has hired 29 new Hispanic employees in the last two years.

photo: Janet Wright
ILEANA VALLARINO

ILEANA VALLARINO is the Chief, Employment Programs Division in the Office of Advocacy and Enterprise, and administers all Special Emphasis Programs and Affirmative Employment Programs for the Department. Her family is from Colombia, but she was born in the United States.

IDALIA ACOSTA fled her native Cuba in 1960, two years after Castro came to power. With her she brought her husband, her three small children, ten dollars, and the clothes on her back.

"Castro was very clever," Idalia claims, "he fooled everybody. He told us 'Some people say this is a red revolution, but we are not Communists. This is a green revolution... green like the Cuban palm trees.' And we all believed him. He fooled the people of Cuba and that was easy to do. He fooled the Church in Cuba and that was easy to do. But he fooled the Jesuits, too, and that proves that he was a very clever man!"

But, little by little, the truth became apparent. Idalia and her husband knew that they could not live under Communism, and they made plans to leave. But those were the days of the Bay of Pigs, and many nourished the hope that Castro would not endure. The final straw came when rumors began to circulate that the government was going to take children away from their parents to be educated at special centers.

Idalia taught her last calculus class one Friday evening as usual, and then took her family to the airport the next morning to fly to Miami. As she waited for the plane she was pulled out of line, taken to a back room, strip searched and interrogated. All of her possessions and money except for $5 were taken away from her. When the interrogators final-

ly let her go her knees were so shaky she could barely stand. Her first act upon arriving in the United States was to apply for political asylum.

As soon as they raised the money, Idalia and her husband bought an old Plymouth, loaded up their children, and set off for Washington. The salesman who sold them the car said he would be praying for them because he didn't think the car was going to make it.

But it did!

Idalia's husband got a job at Catholic

photo: Janet Wright
IDALIA ACOSTA

University; Idalia settled the family into a house in Mt. Rainier and began to learn to speak English by listening to the radio night and day. Within nine months she was speaking well enough to start teaching chemistry and calculus at Immaculata College.

Nine years later she was working full time at Catholic University and studying part-time for her Master's in Library Science. (This was the same year she got her American citizenship, 1969.) She came to NAL in 1974 as a Cataloger in Spanish and Portuguese. She has worked her way up to her present position as Head of Cataloging.

Through the years her little house in Mt. Rainier has been a "bed and breakfast" place for scores of Cubans fleeing Cuba. "My house was the Cuban Embassy in exile," says Idalia. Her most celebrated guest may have been the young boy named Xavier Suarez who spent his first three nights in this country on her living room sofa. Later, he went back to Miami and became the Mayor.

CONCLUSION. These personal stories are only meant to bring a positive note into a not so positive overall picture. Only 3% of the total workforce of USDA are Hispanic employees. It should be more. The people we have just talked about have endured much and travelled far. Their successes have largely been due to their own strength of character rather than a system that made it easy for them. Today we are committed to increasing the number of women and minorities in the USDA, not just in the lower grades, but across the board at all levels of management and administration. We feel that with Francisco, Vionette, Ileana, Elda, Ana, and Idalia and others like them working with us, that we cannot fail. That is why we held the FWP/HEP Luncheon--to reaffirm that commitment in a positive and visible way. We invite all of our readers to join us in the celebration and honoring of our colleagues in the spirit of this joyful event.

New Serials Received at NAL

APMIS: Acta Pathologica, Microbiologica et Immunologica Scandinavica. Copenhagen: Munksgaard. m. Vol. 96, no. 1 (Jan. 1988)-
QR1.A6

Acta Manilana. Manila: Research Center for the Natural Sciences, Univ. of Santo Tomas. a. No. 34 (Dec. 1985)-
Q1.A2

Agriculture Annual Report. [Edmonton]: Alberta Agriculture. a. 1985-1986-
S135.A5

Agropecuária Catarinense. [Florianópolis, Santa Catarina, Brasil: Empresa Catarinense de Pesquisa Agropecuária]. q. Vol. 1, no. 1 (mar.-maio 1988)-
S191.A47

Animal & Human Health. [New York, NY: Animal & Human Health, Inc. q. Vol. 1, no. 1 (first quarter 1988)-
SF781.A542

Annual Report/NZ Poultry Board. [Wellington]: The Board. a. 1985-1986-
HD9347.N45N4

Annual Report/Republic of Zambia, Ministry of Lands, Natural Resources and Tourism, National Parks and Wildlife Service. [Lusaka]: The Service. a. 1974-
SB484.Z3Z35

Applied Plant Science = Toegepaste Plantwetenskap. [Sunnyside: Southern African Weed Science Society]. Two issues yearly. Vol. 1, no. 1- [c1987-]
SB317.5.A6

Books in Print Plus (computer file). [New York]: R.R. Bowker. Quarterly, with disk being cumulative. Oct. 1986-
Z1215.B67

Common Sense Pest Control Quarterly. Berkeley, CA: Bio Integral Resource Center. q. Vol 1, no. 1 (fall 1984)-
SB950.A1C62

Encyclopedia of Associations. Regional, State, and Local Organizations. Detroit, MI: Gale Research Co. b-a. 1st ed. (1988-89)-
AS22.E53

España agrícola y ganadera. Madrid: Prensa Hispanoamericana, S.A. Eleven issues a year. II etapa, no. 133 (Sept. 1985)-
HD2022.E82

European Journal of Clinical Nutrition. London: Libbey. m. Vol. 42, no. 1 (Jan. 1988)-
QP141.A1J68

Genetic Engineering. London; New York: Academic Press. 1- [c1981-]
QH442.G455

Immunology. Supplement: an Official Journal of the British Society for Immunology. Oxford, England: Blackwell Scientific Publications. 1- [c1988-]
448.3 Im6 Suppl.

Journal of Potassium Research. Gurgaon, Haryana, India: Potash Research Institute of India. q. Vol. 1, no. 1 (Mar. 1985)-
S645.J68

Meat animals, production, disposition, and income/United States Department of Agriculture, Statistical Reporting Service, Crop Reporting Board. Washington, D.C.: The Board. 1983-
aHD9414.U53

Northern Journal of Applied Forestry. Bethesda, MD: Soc. of American Foresters. q. Vol. 1, no. 1 (Apr. 1984)-
SD143.N6

Pacific Coast Journal. [Sacramento, CA: Pacific Coast Quarter Horse Association. m. Vol. 22, no. 1 (Jan. 1985)-
SF293.Q3Q8

U.S. Distribution Journal. [New York, NY]: BMT Publications. Monthly (plus 1 supplier guide issue). Vol. 215, no 1 (Jan. 1988)-
HD9130.1.U5

World Diary Situation/United States Department of Agriculture, Foreign Agricultural Service. Washington, DC: The Service. s-a. FD1-87 (Nov. 1987)-
aHD9275.A1F62

AGRICOLA SUBJECT CATEGORY CODE INDEX NOW AVAILABLE

NAL is pleased to announce the availability of an index to the *AGRICOLA Subject Category Codes with Scope Notes* (1985 revision), which NAL uses to classify documents for entry into NAL's AGRICOLA online database and the database's print equivalent, the *Bibliography of Agriculture.*

This index was developed as a tool for indexers, catalogers, reference librarians, and other users of the AGRICOLA database. It directs users to entry points in the Scope Notes where information about the proper application of the code(s) can be found. For more information or a copy of the index, contact:

National Agricultural Library
Indexing Branch, Room 011
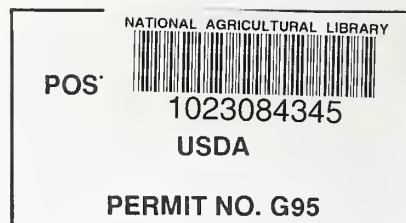*10301 Baltimore Boulevard*
Beltsville, MD 20705
Or call (301) 344-3829.

FWP/HEP LUNCHEON

photos: J. Swab

(Above) Thomas Neis, Executive Officer, NAL, addresses the Luncheon attendees on behalf of the National Agricultural Library, which co-sponsored the event with the Beltsville Area of the Agricultural Research Service; at left is Maryann Loftus and at right Vallie Bray. See pages 16-18 for related articles. (Below) The Orchestra, "La Tentación," plays Hispanic music.